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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/088,363 | 03/08/2002 | David Coates | MERCK 2389 | 4623 |
| 23599 | 7590 | 02/22/2006 | EXAMINER | |
| MILLEN, WHITE, ZELANO & BRANIGAN, P.C. 2200 CLARENDON BLVD. SUITE 1400 ARLINGTON, VA 22201 | | | CALEY, MICHAEL H | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2871 | |

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/088,363 | COATES ET AL. | |
| | Examiner | Art Unit | |
| | Michael H. Caley | 2871 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-22 and 24-33 is/are pending in the application.
- 4a) Of the above claim(s) 29-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-22 and 24-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Claims 29-33 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Applicant timely traversed the restriction (election) requirement in the reply filed on 12/8/05.

Applicant's election with traverse of Group I in the reply filed on 12/8/05 is acknowledged. The traversal is on the ground(s) of undue burden. This is not found persuasive because the individual groups pertain to subject matter recognized as divergent in the art and thus require separate searches from one another.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 16, 20-22, and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winker et al. (U.S. Patent No. 5,557,434 “Winker”) in view of Clerc et al. (U.S. Patent No. 4,701,028 “Clerc”).

Regarding claim 26, Winker discloses an optical compensator for a liquid crystal display having:

at least one O plate retarder (Figure 2 element 250); and

at least one film having the properties of a negative C plate (Figure 2 element 240);

wherein the on-axis optical retardation of the film having properties of a negative C plate is 3-50 nm (Column 5 line 38).

Winker fails to disclose the material of the film having the optical properties of a negative C plate. Winker, however, provides guidance for the construction of such a negative C-plate in Column 2 lines 15-18, “Negatively birefringent C-plates may be fabricated by the use of uniaxially compressed polymers (See, e.g., Clerc, U.S. Pat. No. 4,701,028)...”. Clerc teaches such films as constructed from diacetyl cellulose (Column 6 lines 44-48).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the negative c-plate film disclosed by Winker from a diacetyl cellulose film as taught by Clerc. Winker provides direct guidance for construction of such a layer in reference to Clerc. Thus, one of ordinary skill would have been motivated to use the teachings of Winker and Clerc to construct the negative c-plate from a diacetyl cellulose film as

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proposed to benefit from the expected results of such a construction. For example, such a construction material would have been advantageous to realize the benefits as disclosed by Winker such as improved horizontal viewing angle (Column 2 lines 24-27) by using a preferred construction disclosed by Winker in reference to Clerc.

Regarding claim 16, Winker discloses the average tilt angle within the proposed range (Column 5 lines 56-61).

Regarding claim 20, Winker discloses the thickness of the O plate as from 0.1 – 10 microns (Column 6 lines 3-6).

Regarding claim 21, Winker discloses the optical retardation of the O plate as from 6 – 300 nm (Column 7 lines 42-45).

Regarding claim 22, Winker fails to disclose the thickness of the diacetylcellulose film. Clerk, however, teaches the film as within the proposed range (Column 5 lines 44-48).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the negative c-plate film disclosed by Winker from a diacetyl cellulose film as taught by Clerc. Winker provides direct guidance for construction of such a layer in reference to Clerc. Thus, one of ordinary skill would have been motivated to use the teachings of Winker and Clerc to construct the negative c-plate from a diacetyl cellulose film as proposed to benefit from the expected results of such a construction. For example, such a

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construction material would have been advantageous to realize the benefits as disclosed by Winker such as improved horizontal viewing angle (Column 2 lines 24-27) by using a preferred construction disclosed by Winker in reference to Clerc.

Regarding claim 24, Winker discloses the liquid crystal display comprising

a liquid crystal cell (Figure 2 element 260) formed by two transparent substrates (Figure 2 elements 215 and 235) having surfaces which oppose each other, an electrode layer (elements 220 and 230) provided on the inside of at least one of the two transparent substrates, and a liquid crystal medium which is present between the two transparent substrates, and a liquid crystal medium which is present between the two transparent substrates (element 225),

a pair of polarizers sandwiching the substrates (205 and 255),

at least one optical compensator according to claim 26 (elements 250 and 240) being situated between the liquid crystal cell and at least one of the polarizers,

wherein the above elements can be separated, stacked, mounted on top of each other, coated on top of each other, or connected by means of adhesive layers (Figure 2).

Regarding claim 25, Winker discloses the liquid crystal device as a STN display (Column 4 lines 63-65).

Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winker in view of Clerc and in further view of Koch et al. (U.S. Patent No. 5,619,352 “Koch”).

Winker fails to disclose the tilt angle of the O plate retarder as varying monotonously and having the proposed minimum and maximum values. Koch, however, teaches such an O plate retarder as a beneficial replacement for the O plate retarder disclosed by Winker for reasons of improved gray scale properties and reduced manufacturing cost (Column 10 lines 40-59; Column 12 lines 42-54).

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Winker in view of Clerc and in further view of VanderPloeg et al. (U.S. Patent No. 5,895,106 “VanderPloeg”).

Winker as modified by Clerc fails to disclosed the negative c-plate range of retardation as from 5 to 20 nm. VanderPloeg, however, teaches such a negative c-plate having a specified retardation range overlapping the proposed retardation range (Column 7 lines 58-61).

VanderPloeg teaches the negative c-plate used in combination with an o-plate (Figure 1; Column 4 line 58 – Column 5 line 18) analogously to the combination disclosed by Winker.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a negative c-plate having a retardation within the range of 5 to 20 nm in the display device disclosed by Winker. One would have been motivated to use such a c-plate retardation to benefit from the advantages as taught by VanderPloeg, such as high contrast ratio

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at wide horizontal angles and elimination of gray scale inversion at vertical viewing angles (Column 15 lines 20-42; Figures 12-14).

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Winker in view of Clerc and in light of Jones et al. (U.S. Patent No. 5,990,997 "Jones") and Kashima (U.S. Patent Application Publication No. 2004/0233362).

Regarding claim 28, Winker as modified by Clerc discloses each of the proposed limitations except for the optical retardation of the diacetylcellulose film for light with an angle of incidence of 60 degrees as within the range of 20-250 nm. Winker discloses the optical retardation of a c-plate retarder at 0 degrees incidence as 48 nm.

The disclosures of Jones and Kashima appear to indicate that the optical retardation of the c-plate retarder disclosed by Winker at a 60 degree angle of incidence resides within the range of 20-250 nm. Jones shows the retardation of a combination of a negative c-plate and tilted compensator as gradually increasing with a change in viewing angle (Figure 14). Kashima shows three samples of c-plate and a-plate combinations having gradually increasing retardations with an increase in viewing angle approaching 60 degrees. Sample Y includes a laminated retarder having a retardation of 50 nm at 0 degrees incidence (similar to the c-plate disclosed by Winker) and having a retardation of 100 nm at 50 degrees incidence.

Both Jones and Kashima show that the retardation of the optical compensator gradually increases with increase in viewing angle. Although Winker does not explicitly disclose the retardation of the c-plate layer at the 60 degree angle of incidence, the cited references tend to

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show that the layer disclosed by Winker inherently has a retardation within the range of 20-250 nm at a 60 degree incidence angle (MPEP 2112 IV and V).

Response to Arguments

Applicant's arguments with respect to claims 16-22 and 24-28 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael H. Caley whose telephone number is (571) 272-2286. The examiner can normally be reached on M-F 8:30 a.m. - 5:00 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael H. Caley
February 20, 2006


mhc


ANDREW SCHECHTER
PRIMARY EXAMINER